

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 25, 2025

Mike Medina

Tasman Geosciences

4725 Independence St.

Wheat Ridge, CO 80033

RE: Noble - Bruntz G16-23 Flowline

Work Order #2503365

Enclosed are the results of analyses for samples received by Summit Scientific on 03/26/25 18:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is written in a cursive, flowing style.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS06-A@6'	2503365-01	Soil	03/26/25 12:29	03/26/25 18:00
SS07-A@4'	2503365-02	Soil	03/26/25 12:31	03/26/25 18:00
SS08-A@4'	2503365-03	Soil	03/26/25 12:33	03/26/25 18:00
SS09-A@4'	2503365-04	Soil	03/26/25 12:35	03/26/25 18:00
SS10-A@4'	2503365-05	Soil	03/26/25 12:37	03/26/25 18:00
SS11-A@1'	2503365-06	Soil	03/26/25 12:39	03/26/25 18:00
SS06-B@4'	2503365-07	Soil	03/26/25 14:27	03/26/25 18:00
SS07-B@1'	2503365-08	Soil	03/26/25 14:29	03/26/25 18:00


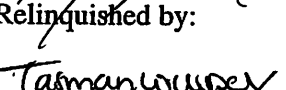
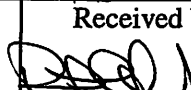
# SUMMIT SCIENTIFIC

4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310

Lab ID	Page 1 of 1
2503365	

Client: Noble / Tasman	Project Manager: Mike Medina	Send Invoice To:
Address: 6855 W 119th Ave 4725V Independence	E-Mail: jason.davidson@chevron.com; tas-chevron-2@tasman-geo.com; rbueuf27@chevron.com	Company: Noble Energy
City/State/Zip: <sup>What's the zip?</sup> Broomfield / CO 1-80020 80055	Project Name: Brantz G16-23 Flowline.	Project Name/Location: Brantz G16-23 Flowline
Phone: 303-487-1228	Project Number:	AFE#:
Sampler Name: Jon Meier	Contact: Jason Davidson	PO/Billing Codes:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	1,2,4 & 1,3,5-TMB	TDS, Cl, SO4	Full 915-1 Suite*		pH, EC, SAR, boron
1	SS06-A@6'	3/26/25	12:29	2			X			X								* Inorganics, PAH's, and Metals on 48 hour turnaround
2	SS07-A@4'		12:31															
3	SS08-A@4'		12:33															
4	SS09-A@4'		12:35															
5	SS10-A@4'		12:37															
6	SS11-A@1' & SS11-A@1'		12:31															
7	SS06-B@4'		14:27															
8	SS07-B@1'		14:29															
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by: 	Date/Time: 2/26/25 1602	Received by: Tasman Drop box	Date/Time: 2/26/25 1602	TAT Business Days	Field DO	Notes:
Relinquished by: 	Date/Time: 2/26/25 1800	Received by: 	Date/Time: 2/26/25 1800	Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Temperature Upon Receipt: 5.7	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:	Standard	Field Turb.	

# S<sub>2</sub>

S2 Work Order# 2503365

### Sample Receipt Checklist

Client: Nobut Tsunan Client Project ID: Bruntz Gil - 23 FaulknerReceived Via: H.D./F.U./FedEx/UPS/USPS/Other  Airbill #: \_\_\_\_\_Matrix (Circle all that apply) Air/Soil/Water/Other  Temp (°C) 3.7 Thermometer # 1Bottle ware (Circle all that apply) Glass Jar/Voa/Amber/Poly/Other 

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	-			on 2CE
If custody seals are present, are they intact? <sup>(1)</sup>	-			
Are samples due within 48 hours?	-			same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD, Total Residual Chlorine (TRC)		-		
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	-			
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	-			
Were all samples received intact? <sup>(1)</sup>	-			
Was adequate sample volume provided? <sup>(1)</sup>	-			
Were samples provided in appropriate bottle ware?	-			
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	-			
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	-			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			-	
Are any samples/bottles preserved (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.			-	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	
Are there requested analysis that cannot be performed by S2? Note analysis in the comments column		-		
Additional Comments (if any):  				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

Control Form #: SRC-001

SN  
Custodian Printed Name3/26/25  
Date/Time



Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS06-A@6'**  
**2503365-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIC1614	03/26/25	03/27/25	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0445	111 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0385	96.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0393	98.2 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIC1615	03/26/25	03/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.97	71.7 %		50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
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**2503365-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC1737	03/28/25	04/23/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0216	64.9 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0237	71.0 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC1625	03/27/25	03/27/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS06-A@6'**  
**2503365-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.45	0.200	mg/kg dry	1	BIC1646	03/27/25	03/29/25	EPA 6020B	
Barium	71.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	6.30	0.400	"	"	"	"	"	"	
Lead	5.39	0.200	"	"	"	"	"	"	
Nickel	5.90	0.400	"	"	"	"	"	"	
Silver	0.0338	0.0200	"	"	"	"	"	"	
Zinc	22.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC1656	03/27/25	03/27/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	47.5	0.0500	mg/L dry	1	BIC1616	03/26/25	03/28/25	EPA 6020B	
Magnesium	9.80	0.0500	"	"	"	"	"	"	
Sodium	47.0	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.62	0.00100	units	1	BID0048	04/01/25	04/01/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS06-A@6'**  
**2503365-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.3		%	1	BIC1630	03/27/25	03/27/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.609	0.0100	mmhos/cm	1	BIC1621	03/26/25	03/27/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **03/26/25 12:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.03		pH Units	1	BIC1619	03/26/25	03/27/25	EPA 9045D	

Summit Scientific

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Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS07-A@4'**  
**2503365-02 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIC1614	03/26/25	03/27/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0508	127 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIC1615	03/26/25	03/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.60	60.8 %	50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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**Reported:**  
04/25/25 09:34

**SS07-A@4'**  
**2503365-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC1737	03/28/25	04/23/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0227	68.0 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0230	69.1 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC1625	03/27/25	03/27/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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4725 Independence St.  
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Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS07-A@4'**  
**2503365-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.78	0.200	mg/kg dry	1	BIC1646	03/27/25	03/29/25	EPA 6020B	
Barium	69.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	9.78	0.400	"	"	"	"	"	"	
Lead	7.93	0.200	"	"	"	"	"	"	
Nickel	6.40	0.400	"	"	"	"	"	"	
Silver	0.0453	0.0200	"	"	"	"	"	"	
Zinc	27.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC1656	03/27/25	03/27/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	62.7	0.0500	mg/L dry	1	BIC1616	03/26/25	03/28/25	EPA 6020B	
Magnesium	8.47	0.0500	"	"	"	"	"	"	
Sodium	58.5	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.84	0.00100	units	1	BID0048	04/01/25	04/01/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS07-A@4'**  
**2503365-02 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>84.8</b>		%	1	BIC1630	03/27/25	03/27/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.848</b>	0.0100	mmhos/cm	1	BIC1621	03/26/25	03/27/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **03/26/25 12:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.85</b>		pH Units	1	BIC1619	03/26/25	03/27/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS08-A@4'**  
**2503365-03 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIC1614	03/26/25	03/27/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0474	118 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0466	116 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIC1615	03/26/25	03/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.88	79.1 %	50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS08-A@4'**  
**2503365-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC1737	03/28/25	04/23/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0242	72.6 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0235	70.6 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC1625	03/27/25	03/27/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS08-A@4'**  
**2503365-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.94	0.200	mg/kg dry	1	BIC1646	03/27/25	03/29/25	EPA 6020B	
Barium	65.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	5.56	0.400	"	"	"	"	"	"	
Lead	5.22	0.200	"	"	"	"	"	"	
Nickel	6.99	0.400	"	"	"	"	"	"	
Silver	0.0445	0.0200	"	"	"	"	"	"	
Zinc	22.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC1656	03/27/25	03/27/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	670	0.0500	mg/L dry	1	BIC1616	03/26/25	03/28/25	EPA 6020B	
Magnesium	124	0.0500	"	"	"	"	"	"	
Sodium	35.7	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.332	0.00100	units	1	BID0048	04/01/25	04/01/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS08-A@4'**  
**2503365-03 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.4		%	1	BIC1630	03/27/25	03/27/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.366	0.0100	mmhos/cm	1	BIC1621	03/26/25	03/27/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **03/26/25 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.35		pH Units	1	BIC1619	03/26/25	03/27/25	EPA 9045D	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS09-A@4'**  
**2503365-04 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIC1614	03/26/25	03/27/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0418	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0401	100 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIC1615	03/26/25	03/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.1	80.7 %	50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS09-A@4'**  
**2503365-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC1737	03/28/25	04/23/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0193	57.8 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0202	60.6 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC1625	03/27/25	03/27/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS09-A@4'**  
**2503365-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.56	0.200	mg/kg dry	1	BIC1646	03/27/25	03/29/25	EPA 6020B	
Barium	110	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.49	0.400	"	"	"	"	"	"	
Lead	10.0	0.200	"	"	"	"	"	"	
Nickel	3.80	0.400	"	"	"	"	"	"	
Silver	0.0384	0.0200	"	"	"	"	"	"	
Zinc	12.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC1656	03/27/25	03/27/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	36.1	0.0500	mg/L dry	1	BIC1616	03/26/25	03/28/25	EPA 6020B	
Magnesium	5.10	0.0500	"	"	"	"	"	"	
Sodium	46.9	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.94	0.00100	units	1	BID0048	04/01/25	04/01/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS09-A@4'**  
**2503365-04 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.8		%	1	BIC1630	03/27/25	03/27/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.394	0.0100	mmhos/cm	1	BIC1621	03/26/25	03/27/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **03/26/25 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.31		pH Units	1	BIC1619	03/26/25	03/27/25	EPA 9045D	

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4725 Independence St.  
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Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS10-A@4'**  
**2503365-05 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIC1614	03/26/25	03/27/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0442	111 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0305	76.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0380	94.9 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIC1615	03/26/25	03/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.57	60.5 %	50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS10-A@4'**  
**2503365-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC1737	03/28/25	04/23/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0223	66.9 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0237	71.2 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC1625	03/27/25	03/27/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS10-A@4'**  
**2503365-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.937	0.200	mg/kg dry	1	BIC1646	03/27/25	03/29/25	EPA 6020B	
Barium	51.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.08	0.400	"	"	"	"	"	"	
Lead	8.73	0.200	"	"	"	"	"	"	
Nickel	1.58	0.400	"	"	"	"	"	"	
Silver	0.0705	0.0200	"	"	"	"	"	"	
Zinc	9.26	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC1656	03/27/25	03/27/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	148	0.0500	mg/L dry	1	BIC1616	03/26/25	03/28/25	EPA 6020B	
Magnesium	18.7	0.0500	"	"	"	"	"	"	
Sodium	17.5	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.360	0.00100	units	1	BID0048	04/01/25	04/01/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS10-A@4'**  
**2503365-05 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.6		%	1	BIC1630	03/27/25	03/27/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.354	0.0100	mmhos/cm	1	BIC1621	03/26/25	03/27/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **03/26/25 12:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BIC1619	03/26/25	03/27/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS11-A@1'**  
**2503365-06 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIC1614	03/26/25	03/27/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0472	118 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0339	84.7 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIC1615	03/26/25	03/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.13	73.0 %	50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS11-A@1'**  
**2503365-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC1737	03/28/25	04/23/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.00543</b>	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0197	59.2 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0204	61.2 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC1625	03/27/25	03/27/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS11-A@1'**  
**2503365-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.844	0.200	mg/kg dry	1	BIC1646	03/27/25	03/29/25	EPA 6020B	
Barium	56.4	0.400	"	"	"	"	"	"	
Cadmium	0.213	0.200	"	"	"	"	"	"	
Copper	3.25	0.400	"	"	"	"	"	"	
Lead	9.88	0.200	"	"	"	"	"	"	
Nickel	1.55	0.400	"	"	"	"	"	"	
Silver	0.0850	0.0200	"	"	"	"	"	"	
Zinc	10.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC1656	03/27/25	03/27/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	82.7	0.0500	mg/L dry	1	BIC1616	03/26/25	03/28/25	EPA 6020B	
Magnesium	12.5	0.0500	"	"	"	"	"	"	
Sodium	17.9	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.485	0.00100	units	1	BID0048	04/01/25	04/01/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
 4725 Independence St.  
 Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
 Project Number: UWRWE-A3660-ABN  
 Project Manager: Mike Medina

**Reported:**  
 04/25/25 09:34

**SS11-A@1'**  
**2503365-06 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	92.9	%	1	BIC1630	03/27/25	03/27/25	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.985	0.0100	mmhos/cm	1	BIC1621	03/26/25	03/27/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **03/26/25 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.57		pH Units	1	BIC1619	03/26/25	03/27/25	EPA 9045D	

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4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS06-B@4'**  
**2503365-07 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIC1614	03/26/25	03/27/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0467	117 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0409	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0417	104 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIC1615	03/26/25	03/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.1	88.4 %	50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS06-B@4'**  
**2503365-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC1737	03/28/25	04/23/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0249	74.7 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0245	73.5 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC1625	03/27/25	03/27/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS06-B@4'**  
**2503365-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.466	0.200	mg/kg dry	1	BIC1646	03/27/25	03/29/25	EPA 6020B	
Barium	60.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.14	0.400	"	"	"	"	"	"	
Lead	3.70	0.200	"	"	"	"	"	"	
Nickel	1.27	0.400	"	"	"	"	"	"	
Silver	0.0209	0.0200	"	"	"	"	"	"	
Zinc	4.86	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC1656	03/27/25	03/27/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	32.0	0.0500	mg/L dry	1	BIC1616	03/26/25	03/28/25	EPA 6020B	
Magnesium	6.10	0.0500	"	"	"	"	"	"	
Sodium	46.9	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.99	0.00100	units	1	BID0048	04/01/25	04/01/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS06-B@4'**  
**2503365-07 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.9		%	1	BIC1630	03/27/25	03/27/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.491	0.0100	mmhos/cm	1	BIC1621	03/26/25	03/27/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **03/26/25 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.30		pH Units	1	BIC1619	03/26/25	03/27/25	EPA 9045D	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS07-B@1'**  
**2503365-08 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIC1614	03/26/25	03/27/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0401	100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0434	109 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIC1615	03/26/25	03/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.21	73.7 %	50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS07-B@1'**  
**2503365-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC1737	03/28/25	04/23/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.00562</b>	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0221	66.3 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0237	71.2 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC1625	03/27/25	03/27/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**SS07-B@1'**  
**2503365-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	0.864	0.200	mg/kg dry	1	BIC1646	03/27/25	03/29/25	EPA 6020B
Barium	45.5	0.400	"	"	"	"	"	"
Cadmium	0.258	0.200	"	"	"	"	"	"
Copper	3.00	0.400	"	"	"	"	"	"
Lead	10.9	0.200	"	"	"	"	"	"
Nickel	1.35	0.400	"	"	"	"	"	"
Silver	0.115	0.0200	"	"	"	"	"	"
Zinc	10.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC1656	03/27/25	03/27/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	45.1	0.0500	mg/L dry	1	BIC1616	03/26/25	03/28/25	EPA 6020B	
Magnesium	11.5	0.0500	"	"	"	"	"	"	
Sodium	69.5	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.39	0.00100	units	1	BID0048	04/01/25	04/01/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
 4725 Independence St.  
 Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
 Project Number: UWRWE-A3660-ABN  
 Project Manager: Mike Medina

**Reported:**  
 04/25/25 09:34

**SS07-B@1'**  
**2503365-08 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	92.3	%	1	BIC1630	03/27/25	03/27/25	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.876</b>	0.0100	mmhos/cm	1	BIC1621	03/26/25	03/27/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **03/26/25 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>6.99</b>		pH Units	1	BIC1619	03/26/25	03/27/25	EPA 9045D	

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4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

#### Batch BIC1614 - EPA 5030 Soil MS

##### Blank (BIC1614-BLK1)

Prepared: 03/26/25 Analyzed: 03/27/25

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
Surrogate: 1,2-Dichloroethane-d4	0.0438		"	0.0400		109	50-150				
Surrogate: Toluene-d8	0.0434		"	0.0400		109	50-150				
Surrogate: 4-Bromofluorobenzene	0.0421		"	0.0400		105	50-150				

##### LCS (BIC1614-BS1)

Prepared: 03/26/25 Analyzed: 03/27/25

Benzene	0.0900	0.0020	mg/kg	0.100		90.0	70-130				
Toluene	0.0820	0.0050	"	0.100		82.0	70-130				
Ethylbenzene	0.0995	0.0050	"	0.100		99.5	70-130				
m,p-Xylene	0.205	0.010	"	0.200		102	70-130				
o-Xylene	0.0869	0.0050	"	0.100		86.9	70-130				
1,2,4-Trimethylbenzene	0.0823	0.0050	"	0.100		82.3	70-130				
1,3,5-Trimethylbenzene	0.0903	0.0050	"	0.100		90.3	70-130				
Naphthalene	0.0807	0.0038	"	0.100		80.7	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0486		"	0.0400		122	50-150				
Surrogate: Toluene-d8	0.0321		"	0.0400		80.2	50-150				
Surrogate: 4-Bromofluorobenzene	0.0427		"	0.0400		107	50-150				

##### Matrix Spike (BIC1614-MS1)

Source: 2503357-01

Prepared: 03/26/25 Analyzed: 03/27/25

Benzene	0.0821	0.0020	mg/kg	0.100	ND	82.1	70-130				
Toluene	0.106	0.0050	"	0.100	ND	106	70-130				
Ethylbenzene	0.0893	0.0050	"	0.100	ND	89.3	70-130				
m,p-Xylene	0.192	0.010	"	0.200	ND	95.8	70-130				
o-Xylene	0.0847	0.0050	"	0.100	ND	84.7	70-130				
1,2,4-Trimethylbenzene	0.0937	0.0050	"	0.100	ND	93.7	70-130				
1,3,5-Trimethylbenzene	0.0925	0.0050	"	0.100	ND	92.5	70-130				
Naphthalene	0.0896	0.0038	"	0.100	ND	89.6	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0499		"	0.0400		125	50-150				
Surrogate: Toluene-d8	0.0518		"	0.0400		130	50-150				
Surrogate: 4-Bromofluorobenzene	0.0381		"	0.0400		95.2	50-150				

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4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

**Batch BIC1614 - EPA 5030 Soil MS**

Matrix Spike Dup (BIC1614-MSD1)	Source: 2503357-01			Prepared: 03/26/25 Analyzed: 03/27/25						
Benzene	0.107	0.0020	mg/kg	0.100	ND	107	70-130	25.9	30	
Toluene	0.0960	0.0050	"	0.100	ND	96.0	70-130	10.1	30	
Ethylbenzene	0.0840	0.0050	"	0.100	ND	84.0	70-130	6.20	30	
m,p-Xylene	0.208	0.010	"	0.200	ND	104	70-130	8.33	30	
o-Xylene	0.0897	0.0050	"	0.100	ND	89.7	70-130	5.68	30	
1,2,4-Trimethylbenzene	0.0988	0.0050	"	0.100	ND	98.8	70-130	5.39	30	
1,3,5-Trimethylbenzene	0.0969	0.0050	"	0.100	ND	96.9	70-130	4.59	30	
Naphthalene	0.0838	0.0038	"	0.100	ND	83.8	70-130	6.61	30	
Surrogate: 1,2-Dichloroethane-d4	0.0598		"	0.0400		149	50-150			
Surrogate: Toluene-d8	0.0417		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0352		"	0.0400		87.9	50-150			

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4725 Independence St.  
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Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

**Batch BIC1615 - EPA 3550A**

**Blank (BIC1615-BLK1)**

Prepared: 03/26/25 Analyzed: 03/27/25

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.2		"	12.5		106	50-140				

**LCS (BIC1615-BS1)**

Prepared: 03/26/25 Analyzed: 03/27/25

C10-C28 (DRO)	518	50	mg/kg	500		104	50-140				
Surrogate: <i>o</i> -Terphenyl	12.2		"	12.5		97.7	50-140				

**Matrix Spike (BIC1615-MS1)**

Source: 2503356-01

Prepared: 03/26/25 Analyzed: 03/27/25

C10-C28 (DRO)	452	50	mg/kg	500	32.1	84.0	50-140				
Surrogate: <i>o</i> -Terphenyl	12.7		"	12.5		102	50-140				

**Matrix Spike Dup (BIC1615-MSD1)**

Source: 2503356-01

Prepared: 03/26/25 Analyzed: 03/27/25

C10-C28 (DRO)	474	50	mg/kg	500	32.1	88.4	50-140	4.75	20		
Surrogate: <i>o</i> -Terphenyl	9.88		"	12.5		79.0	50-140				

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4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch BIC1737 - EPA 5030 Soil MS**

**Blank (BIC1737-BLK1)**

Prepared: 03/28/25 Analyzed: 04/22/25

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0221		"	0.0333		66.4	40-140			
Surrogate: Fluoranthene-d10	0.0219		"	0.0333		65.8	40-140			

**LCS (BIC1737-BS1)**

Prepared: 03/28/25 Analyzed: 04/22/25

Acenaphthene	0.0198	0.00500	mg/kg	0.0333		59.3	40-140			
Anthracene	0.0194	0.00500	"	0.0333		58.3	40-140			
Benzo (a) anthracene	0.0216	0.00500	"	0.0333		64.7	40-140			
Benzo (a) pyrene	0.0205	0.00500	"	0.0333		61.6	40-140			
Benzo (b) fluoranthene	0.0190	0.00500	"	0.0333		57.1	40-140			
Benzo (k) fluoranthene	0.0198	0.00500	"	0.0333		59.4	40-140			
Chrysene	0.0204	0.00500	"	0.0333		61.1	40-140			
Dibenz (a,h) anthracene	0.0192	0.00500	"	0.0333		57.7	40-140			
Fluoranthene	0.0186	0.00500	"	0.0333		55.9	40-140			
Fluorene	0.0197	0.00500	"	0.0333		59.2	40-140			
Indeno (1,2,3-cd) pyrene	0.0173	0.00500	"	0.0333		52.0	40-140			
Pyrene	0.0202	0.00500	"	0.0333		60.5	40-140			
1-Methylnaphthalene	0.0194	0.00500	"	0.0333		58.1	40-140			
2-Methylnaphthalene	0.0193	0.00500	"	0.0333		57.9	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0197		"	0.0333		59.1	40-140			
Surrogate: Fluoranthene-d10	0.0195		"	0.0333		58.5	40-140			

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4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch BIC1737 - EPA 5030 Soil MS**

<b>Matrix Spike (BIC1737-MS1)</b>	<b>Source: 2503328-21</b>			<b>Prepared: 03/28/25 Analyzed: 04/22/25</b>						
Acenaphthene	0.0228	0.00500	mg/kg	0.0333	ND	68.4	40-140			
Anthracene	0.0217	0.00500	"	0.0333	ND	65.0	40-140			
Benzo (a) anthracene	0.0280	0.00500	"	0.0333	ND	84.0	40-140			
Benzo (a) pyrene	0.0257	0.00500	"	0.0333	ND	77.2	40-140			
Benzo (b) fluoranthene	0.0245	0.00500	"	0.0333	ND	73.4	40-140			
Benzo (k) fluoranthene	0.0229	0.00500	"	0.0333	ND	68.7	40-140			
Chrysene	0.0263	0.00500	"	0.0333	ND	78.8	40-140			
Dibenz (a,h) anthracene	0.0250	0.00500	"	0.0333	ND	75.1	40-140			
Fluoranthene	0.0260	0.00500	"	0.0333	ND	77.9	40-140			
Fluorene	0.0228	0.00500	"	0.0333	ND	68.3	40-140			
Indeno (1,2,3-cd) pyrene	0.0249	0.00500	"	0.0333	ND	74.8	40-140			
Pyrene	0.0300	0.00500	"	0.0333	ND	90.1	40-140			
1-Methylnaphthalene	0.0233	0.00500	"	0.0333	ND	69.9	40-140			
2-Methylnaphthalene	0.0232	0.00500	"	0.0333	ND	69.7	40-140			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0238</i>		<i>"</i>	<i>0.0333</i>		<i>71.4</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0233</i>		<i>"</i>	<i>0.0333</i>		<i>70.0</i>	<i>40-140</i>			

<b>Matrix Spike Dup (BIC1737-MSD1)</b>	<b>Source: 2503328-21</b>			<b>Prepared: 03/28/25 Analyzed: 04/22/25</b>						
Acenaphthene	0.0234	0.00500	mg/kg	0.0333	ND	70.2	40-140	2.53	30	
Anthracene	0.0223	0.00500	"	0.0333	ND	67.0	40-140	2.95	30	
Benzo (a) anthracene	0.0258	0.00500	"	0.0333	ND	77.5	40-140	8.00	30	
Benzo (a) pyrene	0.0251	0.00500	"	0.0333	ND	75.3	40-140	2.44	30	
Benzo (b) fluoranthene	0.0232	0.00500	"	0.0333	ND	69.5	40-140	5.43	30	
Benzo (k) fluoranthene	0.0221	0.00500	"	0.0333	ND	66.3	40-140	3.57	30	
Chrysene	0.0236	0.00500	"	0.0333	ND	70.7	40-140	10.8	30	
Dibenz (a,h) anthracene	0.0267	0.00500	"	0.0333	ND	80.1	40-140	6.47	30	
Fluoranthene	0.0238	0.00500	"	0.0333	ND	71.3	40-140	8.96	30	
Fluorene	0.0235	0.00500	"	0.0333	ND	70.6	40-140	3.25	30	
Indeno (1,2,3-cd) pyrene	0.0252	0.00500	"	0.0333	ND	75.7	40-140	1.09	30	
Pyrene	0.0234	0.00500	"	0.0333	ND	70.2	40-140	24.8	30	
1-Methylnaphthalene	0.0242	0.00500	"	0.0333	ND	72.7	40-140	3.98	30	
2-Methylnaphthalene	0.0241	0.00500	"	0.0333	ND	72.3	40-140	3.63	30	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0247</i>		<i>"</i>	<i>0.0333</i>		<i>74.2</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0238</i>		<i>"</i>	<i>0.0333</i>		<i>71.3</i>	<i>40-140</i>			

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4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline  
Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

**Batch BIC1625 - EPA 3050B**

**Blank (BIC1625-BLK1)**

Prepared & Analyzed: 03/27/25

Boron ND 2.00 mg/L

**LCS (BIC1625-BS1)**

Prepared & Analyzed: 03/27/25

Boron 4.75 2.00 mg/L 5.00 95.0 80-120

**Duplicate (BIC1625-DUP1)**

Source: 2503358-01

Prepared & Analyzed: 03/27/25

Boron 0.111 2.00 mg/L 0.115 3.50 20

**Matrix Spike (BIC1625-MS1)**

Source: 2503358-01

Prepared & Analyzed: 03/27/25

Boron 4.92 2.00 mg/L 5.00 0.115 96.2 75-125

**Matrix Spike Dup (BIC1625-MSD1)**

Source: 2503358-01

Prepared & Analyzed: 03/27/25

Boron 4.93 2.00 mg/L 5.00 0.115 96.5 75-125 0.292 25

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Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD		

**Batch BIC1646 - EPA 3050B**

**Blank (BIC1646-BLK1)**

Prepared: 03/27/25 Analyzed: 03/29/25

Arsenic	ND	0.200	mg/kg wet						
Barium	ND	0.400	"						
Cadmium	ND	0.200	"						
Copper	ND	0.400	"						
Lead	ND	0.200	"						
Nickel	ND	0.400	"						
Silver	ND	0.0200	"						
Zinc	ND	0.400	"						
Selenium	ND	0.260	"						

**LCS (BIC1646-BS1)**

Prepared: 03/27/25 Analyzed: 03/29/25

Arsenic	42.5	0.200	mg/kg wet	40.0		106	80-120		
Barium	42.1	0.400	"	40.0		105	80-120		
Cadmium	2.02	0.200	"	2.00		101	80-120		
Copper	43.4	0.400	"	40.0		109	80-120		
Lead	20.9	0.200	"	20.0		105	80-120		
Nickel	43.6	0.400	"	40.0		109	80-120		
Silver	2.00	0.0200	"	2.00		99.9	80-120		
Zinc	41.5	0.400	"	40.0		104	80-120		
Selenium	3.85	0.260	"	4.00		96.3	80-120		

**Duplicate (BIC1646-DUP1)**

Source: 2503080-01

Prepared: 03/27/25 Analyzed: 03/29/25

Arsenic	1.42	0.200	mg/kg dry	1.42		0.0977	20		
Barium	38.1	0.400	"	36.9		3.25	20		
Cadmium	0.0718	0.200	"	0.0763		6.15	20		
Copper	7.45	0.400	"	5.91		23.0	20		QR-04
Lead	19.4	0.200	"	6.54		99.4	20		QR-04
Nickel	3.17	0.400	"	3.68		14.8	20		
Silver	0.0175	0.0200	"	0.0150		15.4	20		
Zinc	21.5	0.400	"	19.5		9.74	20		
Selenium	ND	0.260	"	ND			20		

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

**Batch BIC1646 - EPA 3050B**

**Matrix Spike (BIC1646-MS1)**

Source: 2503080-01

Prepared: 03/27/25 Analyzed: 03/29/25

Arsenic	45.5	0.200	mg/kg dry	43.1	1.42	102	75-125			
Barium	86.6	0.400	"	43.1	36.9	115	75-125			
Cadmium	2.24	0.200	"	2.15	0.0763	100	75-125			
Copper	50.1	0.400	"	43.1	5.91	103	75-125			
Lead	27.0	0.200	"	21.5	6.54	95.2	75-125			
Nickel	47.9	0.400	"	43.1	3.68	103	75-125			
Silver	2.13	0.0200	"	2.15	0.0150	98.2	75-125			
Zinc	61.4	0.400	"	43.1	19.5	97.4	75-125			
Selenium	3.67	0.260	"	4.31	ND	85.2	75-125			

**Matrix Spike Dup (BIC1646-MSD1)**

Source: 2503080-01

Prepared: 03/27/25 Analyzed: 03/29/25

Arsenic	44.3	0.200	mg/kg dry	43.1	1.42	99.5	75-125	2.81	25	
Barium	82.8	0.400	"	43.1	36.9	107	75-125	4.45	25	
Cadmium	2.14	0.200	"	2.15	0.0763	95.9	75-125	4.41	25	
Copper	49.3	0.400	"	43.1	5.91	101	75-125	1.54	25	
Lead	36.5	0.200	"	21.5	6.54	139	75-125	29.7	25	QM-05
Nickel	46.2	0.400	"	43.1	3.68	98.8	75-125	3.55	25	
Silver	2.01	0.0200	"	2.15	0.0150	92.7	75-125	5.74	25	
Zinc	61.1	0.400	"	43.1	19.5	96.7	75-125	0.527	25	
Selenium	3.60	0.260	"	4.31	ND	83.7	75-125	1.81	25	

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Project: Noble - Bruntz G16-23 Flowline  
 Project Number: UWRWE-A3660-ABN  
 Project Manager: Mike Medina

**Reported:**  
 04/25/25 09:34

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

**Batch BIC1656 - 3060A Mod**

<b>Blank (BIC1656-BLK1)</b>		Prepared & Analyzed: 03/27/25									
Chromium, Hexavalent	ND	0.30	mg/kg wet								
<b>LCS (BIC1656-BS1)</b>		Prepared & Analyzed: 03/27/25									
Chromium, Hexavalent	26.7	0.30	mg/kg wet	26.3	102	80-120					
<b>Duplicate (BIC1656-DUP1)</b>		<b>Source: 2503295-01</b>		Prepared & Analyzed: 03/27/25							
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
<b>Matrix Spike (BIC1656-MS1)</b>		<b>Source: 2503295-01</b>		Prepared & Analyzed: 03/27/25							
Chromium, Hexavalent	29.8	0.30	mg/kg dry	27.7	ND	107	75-125				
<b>Matrix Spike Dup (BIC1656-MSD1)</b>		<b>Source: 2503295-01</b>		Prepared & Analyzed: 03/27/25							
Chromium, Hexavalent	29.4	0.30	mg/kg dry	26.6	ND	110	75-125	1.21		20	

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Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
 Project Manager: Mike Medina

**Reported:**  
 04/25/25 09:34

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

**Batch BIC1616 - General Preparation**

**Blank (BIC1616-BLK1)**

Prepared: 03/26/25 Analyzed: 03/28/25

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

**LCS (BIC1616-BS1)**

Prepared: 03/26/25 Analyzed: 03/28/25

Calcium	4.97	0.0500	mg/L wet	5.00	99.4	70-130
Magnesium	4.81	0.0500	"	5.00	96.3	70-130
Sodium	4.76	0.0500	"	5.00	95.2	70-130

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Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
 Project Manager: Mike Medina

**Reported:**  
 04/25/25 09:34

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting		Spike	Source		%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

**Batch BIC1630 - General Preparation**

**Duplicate (BIC1630-DUP1)**

**Source: 2503357-01**

Prepared & Analyzed: 03/27/25

% Solids	78.6		%		82.4			4.72		20	
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 4725 Independence St.  
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Project: Noble - Bruntz G16-23 Flowline  
 Project Number: UWRWE-A3660-ABN  
 Project Manager: Mike Medina

**Reported:**  
 04/25/25 09:34

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

**Batch BIC1621 - General Preparation**

**Blank (BIC1621-BLK1)**

Prepared: 03/26/25 Analyzed: 03/27/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BIC1621-BS1)**

Prepared: 03/26/25 Analyzed: 03/27/25

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 103 95-105

**Duplicate (BIC1621-DUP1)**

**Source: 2503111-01**

Prepared: 03/26/25 Analyzed: 03/27/25

Specific Conductance (EC) 1.44 0.0100 mmhos/cm 1.46 1.52 20

Summit Scientific

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Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
 Project Manager: Mike Medina

**Reported:**  
 04/25/25 09:34

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch BIC1619 - General Preparation**

**LCS (BIC1619-BS1)**

Prepared: 03/26/25 Analyzed: 03/27/25

pH 9.42 pH Units 9.18 103 95-105

**Duplicate (BIC1619-DUP1)**

Source: 2503111-01

Prepared: 03/26/25 Analyzed: 03/27/25

pH 8.44 pH Units 8.41 0.356 20

Summit Scientific

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Project: Noble - Bruntz G16-23 Flowline

Project Number: UWRWE-A3660-ABN  
Project Manager: Mike Medina

**Reported:**  
04/25/25 09:34

### Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values. Only applies to source/DUP and MS/MSD pairs.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference